

SCIENTIFICALLY BASED RESEARCH

According to Title IX PART A (SEC. 9101) of the No Child Left Behind legislation, “scientifically based research:”

- (A) means research that applies rigorous, systematic, and objective procedures to obtain reliable and valid knowledge relevant to educational activities and programs; and
- (B) includes research that -
 - (i) employs systematic, empirical methods that draw on observation or experiment;
 - (ii) uses rigorous data analyses that are adequate to test the stated hypotheses and justify the general conclusions drawn;
 - (iii) relies on measurements or observational methods that provide reliable and valid data across evaluators and observers, across multiple measurements and observations, and across studies by the same or different investigators;
 - (iv) is evaluated using experimental or quasi-experimental designs in which individuals, entities, programs, or activities are assigned to different conditions and with appropriate controls to evaluate the effects of the condition of interest, with a preference for random-assignment experiments, or other designs to the extent that those designs contain within-condition or across-condition controls;
 - (v) ensures that experimental studies are presented in sufficient detail and clarity to allow for replication or, at a minimum, offer the opportunity to build systematically on their findings; and
 - (vi) has been accepted by a peer-reviewed journal or approved by a panel of independent experts through a comparably rigorous, objective, and scientific review.

School leaders and educators who receive federal funds and work with outside evaluators and researchers need to recognize strong scientifically based research practices. One source that identifies “scientifically based interventions (studies)” is the What Works Clearinghouse (WWC). Contracted by the Department of Education, Institute of Sciences, the What Works Clearinghouse

established a set of standards for the review of experimental and quasi-experimental research....[Using these standards] the WWC identifies studies that provide the strongest evidence of effects: primarily well conducted randomized controlled trials and regression discontinuity studies, and secondarily, quasi-experimental studies of especially strong design (Retrieved on May 17, 2005 from the What Works Clearinghouse <<http://w-w-c.org/reviewprocess/standards.html>>).